

Old Attorney Ref.: 32014-175193
New Attorney Ref.: OKI 328

IN THE CLAIMS

Please amend the claims as shown below:

1. (Currently amended) A text to speech synthesizer, comprising:
 - a text analyzer for analyzing Japanese text data;
 - a facial character reading assignment unit for assigning facial character readings to character string portions of text analysis results determined to correspond to facial characters; and
 - a speech synthesizer for outputting synthesized speech based on the analysis results of the text analyzer,wherein the facial character reading assignment unit ~~is constituted by;~~
includes
 - a facial character determining unit for determining whether or not a symbol is a symbol constituting a facial character using an outline symbol table,
 - a characteristic extraction unit for extracting characteristic symbols used in facial characters from facial character strings determined to be for the facial characters, and assigning facial characters corresponding to characteristic symbols, using a character symbol table that associates characteristic symbols with particular reading numbers corresponding to the symbol, and
 - a reading selection unit for outputting readings allotted to extracted reading numbers with reference to a reading table that associates the reading numbers with particular readings corresponding thereto, with the readings being allotted to the

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facial character strings according to the number of appearances of characteristic symbols in the facial characters.

2. (Original) The text to speech synthesizer of claim 1, wherein the facial character reading assignment unit decides upon readings for facial characters using the steps of:

(a) scanning the text and detecting a left outline symbol listed in the outline symbol table,

(b) detecting a right outline symbol within a range of a prescribed number of characters if a left outline symbol is detected,

(c) extracting symbols exhibiting characteristics of eyes from a character string portion encompassed by the left outline symbol and the right outline symbol, and

(d) referring to the characteristic symbol table and the reading table, and deciding upon a corresponding facial character reading from readings for characters exhibiting eyes.

3. (Currently amended) A text to speech synthesizer, comprising:

a text analyzer for analyzing Japanese text data;

a facial character reading assignment unit for assigning facial character readings to character string portions of text analysis results determined to correspond to facial characters; and

a speech synthesizer for outputting synthesized speech based on the analysis results of the text analyzer,

wherein the facial character reading assignment unit ~~is constituted by~~ includes

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a facial character determining unit for determining whether or not a symbol is a symbol constituting a facial character using an outline symbol table,
a characteristic extraction unit for extracting, from character strings determined to be facial characters, characteristic symbols used in facial characters, using a characteristic symbol table from character strings determined to be facial characters consisting of characteristic symbols and number of groups the characteristic symbols belong to, said characteristic extraction unit including a frequency vector calculator for calculating frequencies of characteristic symbols within the facial characters and extracting frequency vectors, and a normalization processor for normalizing the frequency vectors, and

a reading selection unit for selecting and outputting readings for typical vectors most similar to the extracted frequency vectors, using a vector reading table.

~~the characteristic symbol table consists of characteristic symbols and number of groups the characteristic symbols belong to, and~~

~~the characteristic extraction unit comprises a frequency vector calculator for calculating frequencies of characteristic symbols within the facial characters and making frequency vectors, and a normalization processor for normalizing the frequency vectors.~~

4. (Currently amended) The text to speech synthesizer of claim 3, wherein the facial character reading assignment unit decides upon readings for facial characters using the steps of:

(a) scanning the text and detecting a left outline symbol and right outline symbol,

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- (b) extracting characteristic symbols used in facial characters from character strings encompassed by the left outline symbol and the right outline symbol,
 - (c) extracting and normalizing the frequency vectors, the frequency vectors indicating numbers of appearances of the characteristic symbols,
 - (d) selecting typical vectors most similar to the normalized frequency vectors, and
 - (e) taking readings allotted to the typical vectors as facial character readings.
5. (Currently amended) A text to speech synthesizer, comprising:
- a text analyzer for analyzing Japanese text data;
 - a facial character reading assignment unit for assigning facial character readings to character string portions of text analysis results determined to correspond to facial characters; and
 - a speech synthesizer for outputting synthesized speech based on the analysis results of the text analyzer,
- wherein the facial character reading assignment unit ~~is constituted by~~ includes
- a facial character determining unit for determining whether or not a symbol is a symbol constituting a facial character, using an outline symbol table that is lined up based on similarities between shape characteristics,
 - a characteristic extraction unit for extracting characteristic symbols used in facial characters using a characteristic symbol table from character strings determined to be facial characters, said characteristic extraction unit including a frequency vector calculator for calculating the frequency of characteristic symbols

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within the facial characters and extracting frequency vectors and a normalization processor for normalizing frequency vectors, and

a reading selection unit for selecting and outputting readings for typical vectors most similar to the extracted frequency vectors, using a vector reading table,;

~~the characteristic symbol table is lined up based on similarities between shape characteristics, and~~

~~the characteristic extraction unit comprises a frequency vector calculate for calculating frequency of characteristic symbols within the facial characters and extracting frequency vectors and a normalization processor for normalizing frequency vectors.~~

6. (Currently amended) The text to speech synthesizer of claim 5, wherein the facial character reading assignment unit decides upon readings for facial characters using the steps of:

- (a) scanning the text and detecting a left outline symbol and right outline symbol,
- (b) extracting characteristic symbols used in facial characters from character strings encompassed by the left outline symbol and the right outline symbol,
- (c) extracting and the frequency vectors, the frequency vectors indicating numbers of appearances of the characteristic symbols, filtering processing the frequency vectors and normalizing the frequency vectors after the filtering processing,
- (d) selecting typical vectors most similar to the normalized frequency vectors, and
- (e) taking readings allotted to the typical vectors as facial character readings.

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